

PATENT**Atty Docket No.: 10007965-1
App. Ser. No.: 09/955,764****REMARKS**

Favorable reconsideration of this application is respectfully requested in view of the following remarks. Currently, claims 1-43 are pending in the present application of which claims 1, 29, and 36 are independent.

Claims 1-7, 9-11, 13-19, 21-32, and 35-42 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kazi et al. ("JaViz: A Client/Server Java Profiling Tool") in view of Blumson et al. ("Automatic Insertion of Performance Instrumentation for Distributed Applications") and further in view of Delucia et al. (U.S. Patent Number 4,819,233) and Tucker et al. (U.S. Patent Number 6,151,639).

Claims 8, 12, and 43 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kazi et al., Blumson et al., Delucia et al., and Tucker et al. as applied to claims 7, 9, and 36, respectively, and further in view of Courant et al. (U.S. Patent Number 5,522,073).

Claim 20 has been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kazi et al., Blumson et al., Delucia et al., and Tucker et al. as applied to claim 9 and further in view of Brandle et al. (U.S. Patent Number 5,146,593).

Claims 33 and 34 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kazi et al., Blumson et al., Delucia et al., and Tucker et al. as applied to claim 29 and further in view of Peek et al. ("Unix Power Tools").

The above rejections are respectfully traversed for at least the reasons set forth below.

PATENTAtty Docket No.: 10007965-1
App. Ser. No.: 09/955,764**Claim Rejection Under 35 U.S.C. §103**

The test for determining if a claim is rendered obvious by one or more references for purposes of a rejection under 35 U.S.C. § 103 is set forth in MPEP § 706.02(j):

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Therefore, if the above-identified criteria are not met, then the cited reference(s) fails to render obvious the claimed invention and, thus, the claimed invention is distinguishable over the cited reference(s).

Claims 1-7, 9-11, 13-19, 21-32, and 35-42 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kazi et al. in view of Blumson et al., Delucia et al., and Tucker et al.

Claim 1

Claim 1 recites, *inter alia*,

"recording a stub start log data including a global causal identifier in an instrumented stub before said invocation of said second software component;
transmitting the global causal identifier from the first software component to the second software component ...;
recording a stub end log data including the global causal identifier ...;"

The Office Action rejects the claimed recording features by first citing the following passage in Kazi et al. (last paragraph, p. 7):

PATENT

Atty Docket No.: 10007965-1
App. Scr. No.: 09/955,764

"The trace generation module of the Jvm is modified to record every invocation of a method using time stamps that show the start and end times of the method with microsecond resolution."
(Emphasis added in Office Action).

Next, the Office Action admits that Kazi et al. does not expressly disclose the recording of log data *before* invocation, the transmission of the global causal identifier from the first software component to the second software component, and whether the data is recorded before or after invocation. However, the Office Action alleges that the aforementioned deficiencies are found in Delucia et al., which discloses:

"Where the target code unit calls another routine, executable write instructions are inserted by a processor before and after the call statement to generate in the output documentation an indication that the call statement was reached and that the program returned to the correct location after the call."
(Delucia et al., Col. 2, ll. 37-42).

Therefore, the Office Action concludes, it would have been obvious to use "Delucia's teaching of code instrumentation techniques with Kazi's instrumented JVM" because of the motivation to "place instrumentation before and after a call as an indication that the call completed successfully." (Id. at Col. 2, ll. 41-42).

It is respectfully submitted that in order for the Jvm's trace generation module in Kazi et al. to record every method invocation using time stamps to show the start and end times of the method, it is necessary that such recordation is done *no earlier* than the actual start and end times of the invocation of the method. Without the method invocation actually starting and ending, there would be no time stamps of start and end times to record. This is in contrast to claim 1, which recites a "recording of a stub start log data ... *before said invocation* of said second software component." (Emphasis added).

In addition, Delucia et al. does not make up for the deficiencies in Kazi et al. with respect to claim 1 because, as admitted in the Office Action, Delucia et al. merely shows the

PATENT**Atty Docket No.: 10007965-1
App. Ser. No.: 09/955,764**

insertion of executable write instructions before and after a call statement "as an indication that the call completed successfully," which is quite different from the recitation of "recording of a stub start log data ... *before said invocation* of said second software component" in claim 1. Thus, while there may arguably be motivation to combine "Delucia's teaching of code instrumentation techniques with Kazi's instrumented JVM," the resulting combination still does not teach or suggest all the features recited in claim 1.

The Office Action also rejects the claimed global causal identifier by citing the following three (3) different passages in Kazi et al.:

"In addition to the parent-child links to reflect the call graph, each record contains such information as the number of methods invoked by this method, the time when the method started, the time when it completed, the thread executing this method, the method identifier of the method call being represented, and the specific Jvm on which the method is executed." (Id., paragraph 3, p. 5; emphasis added by Office Action, hereinafter, "Passage 1").

"To trace client/server activities through RMI, every object to be exported to a remote Jvm is given a unique identifier automatically by the server Jvm. Similarly, each method that can be remotely invoked in an exported object is also given a unique (within a class) identifier by the RMI module. For every remote method invoked through RMI, JaViz's modified Jvm records these identifiers at both the client side and the server side." (Id., paragraph 4, p. 8; emphasis added by Office Action, hereinafter, "Passage 2").

"Additionally, a thread identifier is recorded to uniquely identify the thread executing the method." (Kazi et al., last paragraph, p. 7; emphasis added by Office Action; hereinafter, "Passage 3").

Thus, the Office Action apparently cites three (3) separate and distinct identifiers found in Kazi et al. to reject a single global causal identifier recited in claim 1. These identifiers are a method identifier in Passage 1, an object identifier in Passage 2, and a thread identifier in Passage 3. The method identifier, as stated in Passage 1, is for identifying a particular method being invoked. The object identifier, as stated in Passage 2, is for

PATENTAtty Docket No.: 10007965-1
App. Ser. No.: 09/955,764

identifying an object to be exported to a remote Jvm. The thread identifier, as stated in Passage 3, is for identifying a particular thread that an invoked method uses to execute. The Office Action further rejects the claimed "transmitting the global causal identifier from the first software component to the second software component" by injecting a fourth identifier, the "system-wide identifier" found in Tucker et al. (col. 3, ll. 22-24).

It is respectfully submitted that the above-identified rejection is improper because the Office Action selectively cites 3 different identifiers in Kazi et al. and a fourth "system-wide identifier" in Tucker et al. to reject one and the same global causal identifier at different instances in claim 1 in an attempt to forcibly fit the disclosure of Kazi et al. to the language in claim 1. In one respect, this rejection creates confusion as to which one of the thread identifier, the method identifier, and the object identifier in Kazi et al., and the system-wide identifier in Tucker et al. the Office Action considers to be the claimed global causal identifier. In another respect, this rejection runs contrary to the language in claim 1, which recites one and the same global causal identifier throughout the claim.

Furthermore, none of the thread identifier, method identifier, and object identifier disclosed in Kazi et al. qualifies as the claimed global causal identifier or corresponds to the transmitting system-wide identifier in Tucker et al. Specifically, Kazi et al. makes no mention of a transmission of the thread identifier from one Jvm to another Jvm. At best, Kazi et al. discloses that the thread identifier is only saved in a .prf file in the executing Jvm. Kazi et al., paragraph 3, p. 4. Likewise, the method identifier is given by the RMI module to the executing Jvm that performs the remote method lookup with no transmission to any other Jvm. Id. at paragraph 4, p. 8. As for the object identifier, it is given by the server Jvm and remains in the server Jvm with no transmission to any other Jvm. Id.

PATENT**Atty Docket No.: 10007965-I
App. Ser. No.: 09/955,764**

Because Kazi et al., Delucia et al., and Tucker et al. fail to teach or suggest all the claimed features in claim 1, and the Office Action has not relied on Blumson et al. to cure such defects, the Office Action fails to establish a *prima facie* case of obviousness of claim 1 in view of Kazi et al., Blumson et al., Delucia et al., and Tucker et al. Accordingly, it is respectfully submitted that claim 1 and its dependent claims 2-28 are allowable over the references of record, and the Examiner is respectfully requested to withdraw the rejection of claims 1-28.

Claim 29

Claim 29 recites, *inter alia*,

"accumulating one or more stub start log data entries including a global causal identifier wherein the global causal identifier is transmitted from a first software component to a second software component ..., with a stub start log data entry of said one or more stub start data entries being recorded by an instrumented stub before a subsequent software component invocation"

and other features of one and the same global causal identifier. Therefore, all of the aforementioned reasons for the allowability of claim 1 also apply to claim 29 and its dependent claims 30-35.

Accordingly, it is respectfully submitted that the Office Action also fails to establish a *prima facie* case of obviousness against claims 29-35, and the Examiner is respectfully requested to withdraw the rejection of claims 29-35.

PATENT

Atty Docket No.: 10007965-1
App. Ser. No.: 09/955,764

Claim 36

Claim 36 recites, *inter alia*,

"wherein said one or more instrumented stubs is configured to transmit said global causal identifier from one of the software components in the at least one processing device to at least one other component in the at least one other processing device."

As stated in the aforementioned reasons for the allowability of claim 1, there is confusion as to which one of the thread identifier, method identifier, object identifier, and system-wide identifier, the Office Action considers to be the claimed global causal identifier.

Furthermore, none of the first three identifiers qualifies as the claimed global causal identifier or corresponds to the system-wide identifier because, for instance, none of the first three identifiers is transmitted from one software component to another software component, as recited in claim 36.

Accordingly, it is respectfully submitted that the Office Action also fails to establish a *prima facie* case of obviousness against claims 36 and its dependent claims 37-43, and the Examiner is respectfully requested to withdraw the rejection of claims 36-43.

Claims 8, 12, and 43

Claims 8, 12, and 43 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kazi et al., Blumson et al., Delucia et al., and Tucker et al. as applied to claims 7, 9, and 36, respectively, and further in view of Courant et al. The Applicants submit that claims 7, 9, and 36 are not obvious over Kazi et al. in view of Blumson et al., Delucia et al., and Tucker et al. Therefore, claims 8, 12, and 43 which depend from claims 7, 9, and 36, respectively, are allowable at least by virtue of their dependencies. In addition, the Office Action does not and cannot reasonably rely upon Courant et al. to make up for the

PATENTAtty Docket No.: 10007965-1
App. Ser. No.: 09/955,764

deficiencies in Kazi et al. and Blumson et al. with respect to claims 7, 9, and 36. The Examiner is therefore respectfully requested to withdraw the rejection of claims 8, 12 and 43 and to allow these claims.

Claim 20

Claim 20 has been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kazi et al., Blumson et al., Delucia et al., and Tucker et al. as applied to claim 9 and further in view of Brandle et al. The Office Action does not rely upon the disclosure contained in Brandle et al. to make up for the deficiencies in Kazi et al. in view of Blumson et al., Delucia et al., and Tucker et al. as described hereinabove. In this regard, because claim 9 of the present invention is considered to be allowable over the disclosures contained in Kazi et al., Blumson et al., Delucia et al., and Tucker et al., claim 20 is also considered to be allowable over these disclosures. The Examiner is therefore respectfully requested to withdraw the rejection of claim 20 and to allow this claim.

Claims 33 and 34

Claims 33 and 34 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kazi et al., Blumson et al., Delucia et al., and Tucker et al. as applied to claim 29 and further in view of Peck et al. It is respectfully submitted that claim 29 is not obvious over Kazi et al. in view of Blumson et al., Delucia et al., and Tucker et al. Therefore, claims 33 and 34 which depend from claim 29 are allowable at least by virtue of their dependencies. In addition, the Office Action does not and cannot reasonably rely upon Peck et al. to make up for the deficiencies in Kazi et al., Blumson et al., Delucia et al., and Tucker

PATENTAtty Docket No.: 10007965-1
App. Ser. No.: 09/955,764

et al. with respect to claim 29. The Examiner is therefore respectfully requested to withdraw the rejection of claims 33 and 34 and to allow these claims.

Conclusion

In light of the foregoing, withdrawal of the rejections of record and allowance of this application are earnestly solicited.

Should the Examiner believe that a telephone conference with the undersigned would assist in resolving any issues pertaining to the allowability of the above-identified application, please contact the undersigned at the telephone number listed below. Please grant any required extensions of time and charge any fees due in connection with this request to deposit account no. 08-2025.

Respectfully submitted,

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